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TRANSMITTAL FORM (to be used for all correspondence after initial filing)		Application Number	09/988,821
		Filing Date	November 20, 2001
		First Named Inventor	Ronald J. VIDAL
		Art Unit	3673
		Examiner Name	Michael SAFAVI
Total Number of Pages in This Submission		Attorney Docket Number	297810-08US (Formerly 1757.0260001)

ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to Group (Appeal Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Credit Card Payment Form for \$500.00; Two additional copies of Appeal Brief; Return Postcard
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Signature	
Date	December 9, 2005

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FEE TRANSMITTAL for FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500.00

Complete if Known

Application Number	09/988,821
Filing Date	November 20, 2001
First Named Inventor	Ronald J. Vidal
Examiner Name	Michael Safavi
Art Unit	
Attorney Docket No.	74120-297810

METHOD OF PAYMENT (check all that apply)

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FEE CALCULATION
1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee(\$)	Fee(\$)	Small Entity Fee(\$)	Fee(\$)	Small Entity Fee(\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES
Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims **Extra Claims** **Fee(\$)** **Fee Paid (\$)**

_____ -20 or HP = _____ X _____ = _____

(\$)

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims **Extra Claims** **Fee(\$)** **Fee Paid (\$)**

_____ - 3 or HP = _____ X _____ = _____

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).


Total Sheets **Extra Sheets** **Number of each additional 50 or fraction thereof** **Fee (\$)** **Fee Paid (\$)**
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief

Fees Paid (\$)
\$500.00
SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	47,629	Telephone	303-607-3747
Name (Print/Type)	Douglas M. Hamilton	Date	12/09/2005		

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PATENT
Attorney Docket No. 74120-297810US
(Formerly 1757.0260001)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ronald J. VIDAL et al.

Application No.: 09/988,821

Filed: November 20, 2001

For: CABLE INSTALLATION

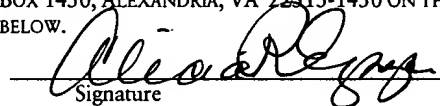
Examiner: Michael SAFAVI

Art Unit: 3673

Confirmation No.: 8685

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APPEAL BRIEF IN SUPPORT OF APPELLANT'S APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Sir:

Applicant (hereafter "Appellant") hereby submits this Brief in triplicate in support of its appeal from a decision by the Examiner, mailed August 29, 2005, in the above-referenced application. Appellant respectfully requests consideration of this Appeal by the Board of Patent Appeals and Interferences (the "Board") for allowance of the above-captioned patent application. An oral hearing is not desired.

Appellant previously filed a notice of appeal for the present application on October 26, 2005. The present application includes claims that have now been twice rejected by the Examiner based upon an improper combination of references and without consideration of each

and every element of the claims. Hence, this appeal is ripe, and Appellant's Brief in support of this appeal follows.

REAL PARTY IN INTEREST

The real party in interest in this Appeal is Level 3 Communications, Inc., the assignee of all rights to the invention disclosed in the present application. The assignment of the inventors' rights to LEVEL 3 COMMUNICATIONS, INC. was recorded in the United States Patent and Trademark Office on June 12, 2002, at Reel 012988, Frame 0316.

RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences related to this Appeal.

STATUS OF CLAIMS

Claims 1-34 are currently pending in the above-referenced application (see Appendix). Claims 2-15 and 17-21 are as originally filed with the exception of minor typographical defects previously corrected in claims 2, 3, 7, 17, 18 and 20 through Appellant's Amendment of 12/30/2003. Claims 22-26 were added in that same amendment. Claims 27-33 were added through an amendment filed with Appellant's RCE filed 10/18/2004. In addition, claims 1 and 16 were amended and claim 34 was added through Appellant's Amendment of 6/13/2005.

In the Office Action mailed August 29, 2005, (the "Latest Office Action") after the Appellant's RCE was filed, the Examiner (1) rejected claims 1-10 and 13-34 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,164,872 ("Morishige") in view of U.S. Patent No. 5,722,793 ("Peterson") when considering the Federal Highway Administration report/publication "Prevention and Control of Highway Tunnel Fires," ("FHA"), and (2) rejected claims 1-33 under 35 U.S.C. §103(a) over United Kingdom reference 2,357,944 ("UK '944") in

view of Peterson when considering any of Fischer or European reference 1,039,201 ("EU '201") or Japanese reference 9-322371 ("Japan '371"). Claims 1-34 as set forth in the Amendment and Response to Office Action mailed August 29, 2005, are the subject of this Appeal.

STATUS OF AMENDMENTS

No amendment has been filed subsequent to the Latest Office Action which rejected claims 1-34. A copy of all claims on appeal is attached hereto in the Appendix of Claims.

SUMMARY OF INVENTION

The systems and methods disclosed in the present application generally relate to the installation of cables over an extended span. In particular, the systems and methods disclosed in the present application provide for terminating a cable in a desired location without incurring the technical, legal and/or cost challenges incurred in terminating a cable at or near a particular destination. As just one specific example, the present invention can be applied to installing a transcontinental cable. Prior to the present invention, a cable was typically installed from a location on one continent to a location on another continent, and involved incurring substantial expenses in bringing the cable onshore at the continental termination points. These substantial expenses can include, for example, fees for the right of way to install the cable both onshore and near the shore.

In stark contrast, the present invention addresses this problem by bringing a plurality of ducts onshore at a desired location and making the plurality of ducts accessible at an offshore terminal. The costs of bringing a cable from one continent to this offshore location are less than bringing the cable from the continent directly to another continent. The cable is then brought from the offshore terminal to the destination continent via the previously installed plurality of

ducts. The costs and problems associated with bringing the cable from the offshore terminal to the destination continent via the previously installed plurality of ducts are negligible compared to bringing the cable directly onshore.

Thus, as applied to the aforementioned specific example, the systems and methods of the present invention can be utilized to allow the addition of new point-to-point cable connections “without the need to repeat the underwater laying process in the vicinity of the shore” where significant disruption of cable occurs from fishing, dredging and other shipping activities, and where laying cable is often highly regulated. Application at ¶ 9; see also, Id. at ¶¶ 11-12. Such an offshore termination point fed by a plurality of ducts extending to the first point can, for example, “significantly reduce the overall technical effort required to provide a subsequent long distance cable link”. Id. at ¶11. This is at least in part because “[a] large amount of construction work is required in landing a cable, and, in the case of coastal installations, permits are required to land a cable and new cables must often be laid in place of old in the same route.” Id. Thus, “for example in a case of a cable crossing of many hundreds or even thousands of kilometers, provision of multiple ducting over a relatively small proportion of the distance can potentially significantly reduce expense and complication of subsequent cable installation operations.” Id. at ¶12. Use of an offshore termination point further allows for installing subsequent cables without necessarily requiring multiple ducts across the entire span of the connection. Id. at ¶7.

A. Claims 1-15, 22-24, 27-30, and 34

Claims 1-15 and 22-24 provide methods of facilitating provision of a point-to-point cable connection between first and second points separated by an extended span of water including a first region of shallow water and a second region of relatively deep water. Such methods include, *inter alia*, providing a plurality of ducts from the first point through the first region of the extended span to an offshore termination point between the first and second points, wherein the plurality of ducts are combined to form a multiple duct conduit (*see, as just some examples*, Application at Abstract, ¶¶ [0009]-[0029], and [0135]-[0145], and Figs. 1, 2, 7); placing a first communication cable in one of said plurality of ducts to provide a connection between the first point and said offshore termination point (*see, as just some examples*, Application at ¶¶ [0009], [0029], [0135]-[0145], and Figs. 1, 2 and 23); receiving at said offshore termination point, a second communication cable from the second point (*see, as just some examples*, Application at Abstract, ¶¶ [0038] and [0050]); and connecting said first communication cable to said second communication cable at said offshore termination point to create the point-to-point cable connection. (*see, as just some examples*, Application at Abstract, ¶¶ [45-48] and [157-163]).

B. Claims 16-21 and 31-32

Claims 16-21 and 31-32 provide systems for facilitating provision of a point-to-point cable connection between first and second points separated by an extended span of water including a first region of shallow water and a second region of relatively deep water. Such systems include, *inter alia*, an offshore termination point located between the first and second points, for receiving at least one first communication cable from the first point and at least one second communication cable from the second (*see, as just some examples*, Application at

Abstract, ¶¶ [0009]-[0029], [0038], [0044], [0050], [0135]-[0145], and Figs. 1, 2); and a plurality of ducts extending from the first point through the first region of the extended span to said offshore termination point, each of said ducts being configured to receive at least one first communication cable (*see, as just some examples*, Application at Abstract, ¶¶ [0009]-[0029] and [0135]-[0145], and Figs 1, 2, 7); wherein the plurality of ducts includes at least two conduits formed as a multiple duct conduit. (*see, as just some examples*, Application at ¶¶ [0009]-[0029], [0041], [0135-0145], and Figs. 1, 2 and 7)

C. Claims 25-26

Claims 25-26 provide a multi-point cable connection system is provided according to various embodiments of the present invention. Such systems include, *inter alia*, a termination point located at a first location, wherein the termination point includes a first cable end associated with a first communication cable that extends from the termination point to a second location, and a second cable end associated with a second cable that extends from the termination point to a third location (*see, as just some examples*, Application ¶¶ [0058] and [0067]); a plurality of ducts extending from a fourth location to the termination point, wherein a third cable end associated with a third communication cable emerges from one of the plurality of cable ducts, and wherein a fourth cable end emerges from another of the plurality of cable ducts (*see, as just some examples*, Abstract, Application ¶¶ [0038] and [0050]); and wherein the third cable end is connected to the first cable end at the termination point, and wherein the fourth cable end is connected to the second cable end at the termination point. (*see, as just some examples*, Application at Abstract, ¶¶ [0011], [0018], [0038], [0050] and [0054]-[0059]).

D. Claim 33

Continuing with independent claim 33, a method of providing communication between first and second points separated by an extended span of water including a first region of shallow water and a second region of relatively deep water is described according to various embodiment of the present invention. In one or more of these embodiments, the method comprises: providing a plurality of ducts from the first point through the first region of the extended span to an offshore termination point between the first and second point, wherein the offshore termination point is an offshore platform (*see, as just some examples*, Application at Abstract, ¶¶ [0009]-[0029], [0044], and [0137], element 240 of FIG. 1); placing a first cable in one of said plurality of ducts to provide a connection between the first point and said offshore termination point (*see, as just some examples*, Application at ¶¶ [0009]-[0011], [0029], [0135], element 320 of FIGS. 1 and 23); receiving at said offshore termination point, a second cable from the second point (*see, as just some examples*, Application at Abstract, ¶¶ [0038] and [0050]); and providing communication equipment on said offshore platform to receive and transmit signals via the first and second cables. (*see, as just some examples*, Application at ¶ [0198])

ISSUES

1. Whether claims 1-10 and 13-34 are patentable over Morishige in view of Peterson when considering the Federal Highway Administration report/publication “Prevention and Control of Highway Tunnel Fires”.

1a. Whether each and every element of the claims have been properly considered in the rejection.

1b. Whether each and every element of the claims are disclosed taught or suggested by the cited references.

1c. Whether the cited references are properly combinable in any way that renders the claims at issue unpatenable.

2. Whether claims 1-33 are patentable over United Kingdom reference 2,357,944 in view of Peterson when considering any of Fischer or European reference 1,039,201 or Japanese reference 9-322371.

2a. Whether each and every element of the claims have been properly considered in the rejection.

2b. Whether each and every element of the claims are disclosed taught or suggested by the cited references.

2c. Whether the cited references are properly combinable in any way that renders the claims at issue unpatenable.

GROUPING OF CLAIMS

For the purposes of this appeal the following claim groupings apply:

- | | |
|------------|--------------------------------------|
| GROUP I | Claim 5 |
| GROUP II | Claim 8 |
| GROUP III | Claim 9 |
| GROUP IV | Claim 23 |
| GROUP V | Claim 28 |
| GROUP VI | Claim 29 |
| GROUP VII | Claim 32 |
| GROUP VIII | Claim 34 |
| GROUP IX | Claims 1-11, 16-21, 23-24, and 27-34 |
| GROUP X | Claims 22 and 25-26 |

**ARGUMENT – THE EXAMINER HAS FAILED TO ADDRESS EACH AND EVERY ELEMENT OF THE
CLAIMS – ISSUES 1A AND 2A**

Appellant has on multiple occasions respectfully requested a proper consideration of the claims at issue. In particular, the appellant has repeatedly requested that the Examiner consider each and every element of the claims, and has repeatedly pointed out that the Examiner has utterly failed to provide an adequate basis to support the improper combination of references that has been cited against the claims at issue. In response, appellant has received nothing more than self serving statements unsupported by the cited art, and arguments finding basis only in hindsight to continue thwarting any rational progress of the application. Hence, appellant finds itself with no choice but to file this appeal.

As the board knows, one of the basic precepts of patent examination is that a rejection must fully consider each and every element of each claim of the application. See e.g., In re Royka, 180 USPQ 580 (CCPA 1974) (“All words in a claim must be considered in judging the patentability of that claim against the prior art”). “If the examiner [fails to do so], the applicant is under no obligation to submit evidence of nonobviousness.” MPEP at 2142. The Examiner, however, has chosen to ignore this simple requirement, and the appellant’s repeated request that the Examiner perform an examination as required by the law. See e.g., Amendment of 6/13/05 at p. 7. In particular, the Examiner merely makes the unsupportable conclusory statement that: “the Office Action of February 16, 2005 has taken into consideration each and every limitation of the claims.” Office Action of 8/29/05 at p. 8. This is unsupported by the record.

As just some of many examples, Groups 1-8 include claims with elements that the Examiner has never rejected.

GROUP I.

Claim 5 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, on offshore termination point that is adjacent to a transition between the Continental Shelf and another region. A careful review of the rejections to date reveals that this language has never been properly rejected. Such placement is important to some embodiments of the present invention as it is the location where a change from buried and armored cable to standard cable is possible. See e.g., Application at ¶¶ 135-136. The Latest Office Action does not mention this limitation and none of the cited references, even if they are considered properly combinable which they are not, fail to teach, disclose or suggest such a claim limitation. Indeed, as the cited references fail to even recognize the problems addressed by the claims at issue, it would not be expected that such disclosure would have been found, and the claim would have been recognized as allowable over the cited art. In sum, appellant respectfully requests allowance of claim 5 for at least the aforementioned reason.

GROUP II.

Claim 8 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, burying a plurality of ducts in the seabed. A careful review of the Latest Office Action reveals that this language has not been properly rejected. Such burying reduces the possibility that a cable will be disturbed. See e.g., Application at ¶ 139. Instead of specifically rejecting this limitation, the Examiner chooses to ignore it.

Indeed, the Examiner not only chooses to ignore this claim language, but the language must be ignored for the Examiner to maintain the position that Peterson and Morishige are properly combinable to reject the claims. In particular, the Examiner strains that Peterson is only being cited “to teach direction of application of the Morishige ducts”. Latest Office Action at p. 9. If this is true, then where is the teaching to bury the cable as only Peterson teaches burying? Where this is not true and the rejection is implicitly relying on Peterson to reject the limitation of burying, then Peterson and Morishige are clearly not properly combinable as the Examiner tacitly admits. Latest Office Action at p. 9, and Amendment of 6/13/05 at pp. 9-10 (the Examiner implicitly noting that the method of Peterson is not combinable with Morishige).

In the end, it does not make any difference as the Examiner cannot have it both ways. In this case, either the combination does not properly teach, disclose or suggest the claim limitation, or the combination is not proper. Thus, for at least the reasons set forth above, the appellant respectfully requests allowance of claim 8 for at least the aforementioned reason.

GROUP III.

Claim 9 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, burying a plurality of ducts in the seabed at a depth that decreases as a function of distance . . .” Again, a careful review of the Latest Office Action reveals that this language has not been properly rejected. Such burying reduces the possibility that a cable will be disturbed. See e.g., Application at ¶ 139. Simply stated, this limitation has not been properly rejected, and none of the cited art discloses, teaches or suggests this limitation. Thus, for at least the reasons

set forth above, the appellant respectfully requests allowance of claim 9 for at least the aforementioned reason.

GROUP IV.

Claim 23 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, receiving a communication cable at an offshore termination point as a single point-to-point cable unassociated with a plurality of ducts. This allows, for example, a transoceanic cable to originate apart from a multiple duct, but to terminate onshore via such a multiple duct. Again, a careful review of the Latest Office Action reveals that this language has not been properly rejected. Further, as none of the cited art discloses, teaches or suggests this limitation, the claim language is allowable over the cited art. Thus, for at least the reasons set forth above, the appellant respectfully requests allowance of claim 23 for at least the aforementioned reason.

GROUP V.

Claim 28 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, use of a plurality of at least two separate and distinct conduits that are housed by a multi-bore connection plate located at an end of a length of an outer duct. One example of this is shown in Fig. 8. Again, a careful review of the Latest Office Action reveals that this language has not been properly rejected. Further, as none of the cited art discloses, teaches or suggests this limitation, the claim language is allowable over the cited art. Thus, for at least the reasons

set forth above, the appellant respectfully requests allowance of claim 28 for at least the aforementioned reason.

GROUP VI.

Claim 29 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, use of a plurality of at least two separate and distinct conduits that are housed by a multi-bore connection plate located at an end of a length of an outer duct. One example of this is shown in Fig. 8. Again, a careful review of the Latest Office Action reveals that this language has not been properly rejected. Further, as none of the cited art discloses, teaches or suggests this limitation, the claim language is allowable over the cited art. Thus, for at least the reasons set forth above, the appellant respectfully requests allowance of claim 29 for at least the aforementioned reason.

GROUP VII.

Claim 32 provides a system for facilitating provision of a point-to-point cable connection that includes, *inter alia*, a plurality of ducts with at least two conduits surrounded by an outer duct that is not integrally attached to the plurality of ducts. One example, of this is shown in Fig. 8. Again, a careful review of the Latest Office Action reveals that this language has not been properly rejected. Further, as none of the cited art discloses, teaches or suggests this limitation, the claim language is allowable over the cited art. Thus, for at least the reasons set forth above, the appellant respectfully requests allowance of claim 32 for at least the aforementioned reason.

GROUP VIII.

Claim 34 provides a method for facilitating point-to-point cable connection that includes, *inter alia*, use of a plurality of ducts with one of the ducts forming an outer duct that encompasses at least two other ducts and that includes a water tight seal with a region of trapped air disposed between the outer duct and the other ducts; and installing the plurality of ducts at least in part by eliminating the trapped air such that the plurality of ducts sinks in water. See e.g., Application at ¶¶ 148-149. Again, a careful review of the Latest Office Action reveals that this language has not been properly rejected. Further, as none of the cited art discloses, teaches or suggests this limitation, the claim language is allowable over the cited art. Thus, for at least the reasons set forth above, the appellant respectfully requests allowance of claim 34 for at least the aforementioned reason.

**ARGUMENT -- THE EXAMINER HAS UTTERLY FAILED TO MAKE A *PRIMA FACIE* CASE OF
OBVIOUSNESS --ISSUES 1B, 1C, 2B, 2C**

“To reject claims in an application under section 103, an examiner must show an un rebutted *prima facie* case of obviousness.” *In re Rouffet*, 149 F.3d 1350, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998) *citing In re Deuel*, 51 F.3d 1552, 1557, 34 U.S.P.Q.2d 1210, 1214 (Fed. Cir. 1995). To make a *prima facie* case of obviousness based on more than one reference, an examiner must , among other things, establish “some suggestion or motivation . . . to modify the reference or combine reference teachings”, and that the cited references “teach or suggest all of the claim limitations.” MPEP at 2143. In this case, the Examiner has utterly failed on both

counts. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness as to any of the claims of GROUP I – GROUP X and the claims should be allowed, with such being respectfully requested herein.

A. Morishige And Peterson Are Not Properly Combinable In Any Way That Renders Appellant's Claims Unpatentable – Issue 1c.

Initially, rather than establishing motivation to combine as required, the Examiner merely argued that the combination was “rational” as the teachings of one reference “can readily be applied” to the other. Office Action of March 23, 2004 at p. 5. This statement finds no merit in either the law or the cited references. Now, the Examiner relies on hindsight to derive reasons why one of ordinary skill in the art would have possibly concluded to combine the references. See Office Action of August 29, 2005 at pp. 3-5. However, even with the Examiner's use of hindsight, there is still no reason to combine the references in any way that renders the claims at issue obvious. Simply stated, one of ordinary skill in the art would not combine an automobile tunnel with an underwater cabling method.

First, it is not sufficient to find that the teachings “can be applied”. MPEP at 2143.01 (“The mere fact that references can be combined or modified does not render the resultant combination obvious. . .”); *see also, In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990)(although the prior art device “may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.”). Rather, to properly combine the teachings of Morishige and Peterson, the Examiner must identify something either implicitly or explicitly provided in the cited references, or knowledge generally available to one of ordinary skill in the art that would motivate that person to combine the disclosure of an automobile tunnel disposed above the surface of the seabed (Morishige) with

the disclosure of a device for burying communication cable under the seabed (Peterson). The Examiner has again failed to establish such a suggestion or motivation, and indeed, it is not possible to do such. At least because of this, the rejections should be reversed and the claims in GROUP I – GROUP X should be allowed.

Second, the lack of motivation to combine the references is accentuated by the fact that the principle of operation of either of the cited references is wholly changed where the references are combined. Of course, where the proposed modification or combination changes the principle of operation of the prior art, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP §2143.01 (“If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious”). Here the rejection proposes combining an underwater automobile tunnel of Morishige with a method for burying communication cable of Peterson. The combination would require mounting massive cylinders, in some inconceivable manner, on a remote controlled and self-propelled sea plough for burying in the sea bed. This flies in the face of both references, as well as reason. First, the purpose of Morishige is to provide a method of manufacturing cylindrical sections at sea because they are too large to build on land (twenty meters in diameter by three hundred meters in length). See e.g., Morishige at abstract; col. 27, l. 60 – col. 28, l. 13. Thus, the combination requiring that the sections be mounted on an initially land based sea plough as taught by Peterson completely changes the principle of Morishige. Second, Peterson provides a method for burying flexible conduit in the seabed using a self propelled remote controlled sea plough. See e.g., Peterson at abstract. The conduit must be flexible to facilitate being carried by the sea plough and unrolled onto the sea bed. Replacing the flexible conduit with the massive

inflexible cylinders of Morishige not only changes the principle of Peterson, but actually renders Peterson completely inoperable. Thus, for at least this additional reason the rejections should be reversed and the claims in GROUP I – GROUP XI should be allowed.

Third, one of ordinary skill in the art would not look to a method for constructing an underwater automobile tunnel (i.e., Morishige) for insight in how to provision a point-to-point cable connection. Said another way, the construction of automobile tunnels is neither in the field of endeavor as set forth in Appellant's claims, nor disclosure teaching installation of massive cylinders on the seabed pertinent to the particular problem with which applicants are concerned. MPEP § 2141.01(a); *see also, In re Clay*, 966 F.2d 656, 23 U.S.P.Q.2d 1058 (Fed. Cir. 1992) ("A reference is reasonably pertinent if . . . [it] logically would have commended itself to an inventor's attention in considering his problem."). Again, for at least this additional reason the rejection should be reversed and the claims in GROUP I – GROUP X should be allowed.

B. Morishige and Peterson Fail to Teach the Limitations of Appellant's Claims – Issue 1b

Even if the cited references were properly combinable (which they are not), the Examiner has still failed to make a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. MPEP 2143.03 *citing In re Wilson*, 424 F.2d 1382 (CCPA 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art."). Rather than providing an analysis that identifies a teaching or suggestion of ALL of the claim limitations, the Examiner provides only a cursory rejection that fails to address various of the claim limitations. See e.g., Latest Office Action. Of course, such an approach fails to satisfy the Examiner's burden of making a *prima facie* case of obviousness. Indeed, careful consideration of the cited

art reveals that the elements of the claims at issue are not taught, disclosed or suggested. For at least this additional reason the rejections should be reversed and the claims at issue allowed.

The Examiner's rejections are traversed with respect to independent claims 1, 16 and 25, as well as dependent claim 12. Claim 1 provides a method of facilitating provision of a point-to-point cable connection between first and second points separated by a span of water. The method includes, *inter alia*, providing a plurality of ducts from the first point through a first relatively shallow region to an offshore termination point. A cable is placed in one of the plurality of ducts coupling the first point to the offshore termination point. One or more cables coupling the offshore termination point to one or more locations remote from the first point are available at the offshore termination point. One of the remote locations is the second point, and the cable stretching from the first point to the offshore termination point is connected to the cable stretching from the offshore termination point to the second point.

Thus, as set forth in claim 1, a plurality of ducts are provided from a first location to an offshore termination point where a cable from the first point can be connected to one of a number of cables extending from the offshore termination point to various end points. Such a configuration provides for one or more advantages including, for example, allowing for the addition of new point-to-point cable connections "without the need to repeat the underwater laying process in the vicinity of the shore" where significant disruption of cable occurs from fishing, dredging and other shipping activities, and where laying cable is often highly regulated. Application at ¶ 9 (emphasis added); see also, Id. at ¶ 11.

Such an offshore termination point fed by a plurality of ducts extending to the first point can, for example, "significantly reduce the overall technical effort required to provide a subsequent long distance cable link". Id. at ¶11. This is at least in part because "[a] large

amount of construction work is required in landing a cable, and, in the case of coastal installations, permits are required to land a cable and new cables must often be laid in place of old in the same route.” Id. Thus, “for example in a case of a cable crossing of many hundreds or even thousands of kilometers, provision of multiple ducting over a relatively small proportion of the distance can potentially significantly reduce expense and complication of subsequent cable installation operations.” Id. at ¶12. Use of an offshore termination point further allows for installing subsequent cables without necessarily requiring multiple ducts across the entire span of the connection. Id. at ¶7.

In stark contrast to claim 1, Morishige discloses a method for manufacturing large cylindrical sections that can be used in relation to constructing an underwater automobile tunnel. The method comprises constructing a number of cylindrical tubes of sufficient diameter (i.e. twenty meters) to allow the passage of multiple automobiles and trains there through. See e.g., Morishige at Figs. 40-44; see also, col. 27, l. 60 – col. 31, l. 9. In turn, each of these cylindrical tubes is lowered to the seabed where they rest on “seabed foundations”, and are attached one to another to create a continuous tunnel passing from one land mass to another. See e.g., Morishige at Fig. 38.

Morishige fails to disclose, teach or suggest an *offshore termination point* as provided in claim 1. Rather, Morishige teaches a tunnel stretching from a single entrance point (the left of Fig. 38) to a single destination point (the right of Fig. 38). There is simply no discussion of a point within the tunnel where two or more cables would be connected. Further, there is no discussion why such a point would be desirable. The rejection simply asserts that such a point can be anywhere “at or along 6013 or any point of 6002 extending along the seabed, as well as from another onshore second point to an or the same offshore point.” Office Action of 7/30/03 at

p. 4. However, the rejection fails to discuss or even suggest that one or more cables *terminate* at these amorphous points. Without such a suggestion of cable termination at these points, the points cannot be reasonably construed to be the “offshore termination points” set forth in claim 1.

Peterson discloses “a method and device for continuously laying and burying flexible submarine conduit”. Peterson at col. 1, ll. 5-7. The method disclosed in Peterson includes stretching a cable “between two sites on land separated by a stretch of water”, or between on offshore site and a site on land. Id. at col. 2, ll. 16-18; col. 6, l. 66 – col. 7, l. 7. Both approaches include repeating the underwater laying process in the vicinity of the shore, which is one of the problems avoided by using the method of claim 1. In particular, Peterson expressly teaches using a single duct conduit being laid by a remote controlled and self-propelled sea plough beginning “with a first step of laying and burying the cable on land.” Id. at col. 3, l. 67 – col. 4, l. 1. The sea plough continues into the water until it reaches a predetermined point where it is retrieved by a vessel. Peterson at Figs. 4 and 6. Once retrieved, the cable is laid by a cable laying ship as usual.

Similar to Morishige, Peterson fails to disclose, teach or suggest the use of an offshore termination point fed by a plurality of ducts. Hence, Peterson and Morishige either separate or in combination fails to disclose teach or suggest each element of claim 1. Accordingly, applicants respectfully request withdrawal of the rejection, and allowance of claim 1 for at least the aforementioned reason. Further, claims 2-15 properly depend from allowable independent claim 1, and are thus also allowable for at least this reason.

Also, independent claim 16 includes an offshore termination point similar to that discussed in relation to claim 1 above. Accordingly, independent claim 16 is allowable for at

least the aforementioned reasons. Claims 17-21 properly depend from allowable claim 16, and are thus also allowable for at least this reason.

Claims 22 and 25 –26 are allowable for reasons similar to those discussed above, and additionally provide for connecting cables emerging from a plurality of ducts at a termination point. This provides an ability to connect multiple end points using a plurality of ducts extending from a termination point to at least one of the end points. Such an approach is not even addressed by the Examiner in the Second Office Action, and thus a *prima facie* case has not been established.

C. UK ‘944, Petersen, Fischer, EU ‘210 and Japan ‘371 Fail to Teach the Limitations of Appellant’s Claims – Issue 2b

Similarly, Applicant respectfully points out that the rejection based on UK ‘944, Petersen, Fischer, EU ‘210 and Japan ‘371 fails to set forth a *prima facie* case of obviousness. As amended, claim 1 provides a method of facilitating provision of a point-to-point cable connection between first and second points separated by an extended span of water including a first region of shallow water and a second region of relatively deep water including, *inter alia*, providing a plurality of ducts wherein the plurality of ducts are combined to form a multiple duct conduit. In stark contrast, UK ‘944 discloses a single duct, and does not disclose, teach or suggest a multiple duct approach. Using this single duct, cables may be transitioned from sea to shore without requiring traditional processes associated with landing a cable taught by Petersen.

In particular, Petersen discloses “a method and device for continuously laying and burying flexible submarine conduit”. Peterson at col. 1, ll. 5-7. The method disclosed in Peterson includes stretching a cable “between two sites on land separated by a stretch of water”, or between on offshore site and a site on land. Id. at col. 2, ll. 16-18; col. 6, l. 66 – col. 7, l. 7.

Both approaches include repeating the underwater laying process in the vicinity of the shore, which is one of the problems avoided by using the method of claim 1. In particular, Peterson expressly teaches using a single duct conduit being laid by a remote controlled and self-propelled sea plough beginning “with a first step of laying and burying the cable on land.” Id. at col. 3, l. 67 – col. 4, l. 1. Again, in stark contrast to claim 1, Petersen is a single duct and does not provide disclosure, teaching or suggestion to use the multiple duct approach of claim 1.

Of note, the purpose of UK ‘944 is to eliminate the need for the landing processes disclosed by Petersen. Thus, rather than suggesting a combination with Petersen, UK ‘944 actually teaches away from any combination. As such, the suggested combination of Petersen and UK ‘944 is not proper and Applicant respectfully requests that the rejection be withdrawn based at least on the improper combination.

A. UK ‘944, Petersen, Fischer, EU ‘210 and Japan ‘371 Are Not Properly Combinable In Any Way That Renders Appellant’s Claims Unpatentable – Issue 2c.

The rejection relies upon one of Fischer, EU ‘210 or Japan ‘371 to cure the aforementioned defect in the improper combination of UK ‘944 and Petersen. In doing so, the rejection fails to identify sufficient motivation or suggestion to combine the references. It is well established that any proposed combination must be suggested by the prior art. MPEP 2143.01. Thus, although a prior art device “may be capable of being modified to [operate in accordance with the claim], there must be a suggestion or motivation in the reference to do so.” Id. In this case, the rejection merely relies on an unsupported conclusion that “assuring a well protected communication line . . . would have been a further obvious expedient to one having ordinary skill in the art . . . as taught by any of” Fischer, EU ‘210 or Japan ‘371. Even if this was supported, and the rejection fails to identify such support, it still would not support a

combination of the cited art in any way that renders Applicants' claim obvious. Hence, Applicant respectfully requests that the rejection of claim 1 be withdrawn, and the claim allowed for at least the aforementioned reasons. All other claims either include a similar limitation as that discussed above in relation to claim 1, or are properly dependent from an independent claim including such a limitation. Accordingly, for at least the aforementioned reasons, Applicants respectfully request withdrawal of the rejections of the other claims, and allowance thereof.

CONCLUSION

For at least the reasons set forth above, the Examiner has not put forth a *prima facie* case for rejecting the claims under 35 U.S.C. §103(a). "In absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent." *In re Rouffet*, 149 F.3d 1350, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998) citing *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1993). Accordingly, Appellants respectfully request reversal of the Examiner's rejections, and allowance of the claims.

Application No. 09/988,821
Attorney Docket No. 74120-297810-08US

The appropriate fee of \$660.00 for the filing and consideration of the Notice of Appeal and Appeal Brief is enclosed. Should any additional fee be required, the Commissioner is authorized to charge our Deposit Account No. 06-0029 and requested to notify us of same.

Date: 12/9/2005

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APPENDIX OF CLAIMS
37 C.F.R. § 1.192(c)(9)

The claims on appeal read as follows:

1. A method of facilitating provision of a point-to-point cable connection between first and second points separated by an extended span of water including a first region of shallow water and a second region of relatively deep water, the method comprising:

providing a plurality of ducts from the first point through the first region of the extended span to an offshore termination point between the first and second points, wherein the plurality of ducts are combined to form a multiple duct conduit;

placing a first communication cable in one of said plurality of ducts to provide a connection between the first point and said offshore termination point;

receiving at said offshore termination point, a second communication cable from the second point; and

connecting said first communication cable to said second communication cable at said offshore termination point to create the point-to-point cable connection.

2. The method of claim 1, wherein said first point is onshore and said providing step comprises:

providing said plurality of ducts from the first point through the first region of the extended span to said offshore termination point between the first and second points, wherein said offshore termination point is at a distance of at least 2 kilometers from the first point.

3. The method of claim 1, wherein said first point is onshore and wherein said providing step comprises:

providing said plurality of ducts from the first point through the first region of the extended span to said offshore termination point between the first and second points, wherein said offshore termination point is at a distance of about 10 to 20 kilometers from the first point.

4. The method of claim 1, wherein said first point is onshore and wherein said providing step comprises:

providing said plurality of ducts from the first point through the first region of the extended span to said offshore termination point between the first and second points, wherein said offshore termination point is adjacent to a transition between the first and second regions.

- 1 5. The method of claim 4, wherein said first region is a Continental Shelf.
- 1 6. The method of claim 5, wherein said offshore termination point is positioned in
2 water having a depth of less than about 200m.
- 1 7. The method of claim 1, wherein
2 said placing step comprises placing the first communication cable in one of said plurality
3 of ducts to provide a connection between the first point and said offshore termination point,
4 wherein said cable is a relatively thin, lightweight cable; and
5 said receiving step comprises receiving at said offshore termination point, a second cable
6 from the second point, wherein said second cable is an armored cable.
- 1 8. The method of claim 1, further comprising a step of:
2 burying said plurality of ducts in the seabed.
- 1 9. The method of claim 8, further comprising the step of:
2 burying said plurality of ducts in the seabed at a burial depth that decreases as a function
3 of distance from said first point such that said plurality of ducts are buried deeper near said first
4 point.
- 5 10. The method of claim 9, wherein said first point is onshore, adjacent a shoreline.
- 1 11. The method of claim 1, wherein said providing step comprises:
2 providing said plurality of ducts from the first point through the first region of the
3 extended span to said offshore termination point between the first and second points, wherein
4 said offshore termination point is an offshore platform.
- 1 12. The method of claim 11, wherein said providing step further comprises:
2 providing communication equipment on said offshore platform to receive and transmit
3 signals via said first and second cables.
- 1 13. The method of claim 1, further comprising the step of:
2 providing a plurality of spaced apart cable exits in the region of the offshore termination
3 point.
- 1 14. The method of claim 13, wherein said step of providing a plurality of spaced apart
2 cable exits comprises:
3 providing said plurality of spaced apart cable exits in the region of the offshore
4 termination point, wherein said spaced apart cable exits are preferably spaced apart by at least
5 50m.

1 15. The method of claim 13, further comprising the step of:
2 branching each of said plurality of ducts so that each duct leads to a corresponding cable
3 exit.

1 16. A system for facilitating provision of a point-to-point cable connection between
2 first and second points separated by an extended span of water including a first region of shallow
3 water and a second region of relatively deep water, comprising:

4 an offshore termination point located between the first and second points, for receiving at
5 least one first communication cable from the first point and at least one second communication
6 cable from the second; and

7 a plurality of ducts extending from the first point through the first region of the extended
8 span to said offshore termination point, each of said ducts being configured to receive at least
9 one first communication cable; wherein the plurality of ducts includes at least two conduits
10 formed as a multiple duct conduit.

1 17. The system of claim 16, wherein said offshore termination point is at a distance of
2 at least 2 kilometers from the first point.

1 18. The system of claim 16, wherein said offshore termination point is at a distance of
2 about 10 to 20 kilometers from the first point.

1 19. The system of claim 16, wherein said offshore termination point is adjacent a
2 transition between the first and second regions.

1 20. The system of claim 19, wherein said first region is a Continental Shelf.

1 21. the system of claim 16, further comprising:
2 a first cable extending through one of said plurality of ducts to provide a connection
3 between the first point and said offshore termination point; and

4 a second cable extending from the second point to said offshore termination point.

1 22. The method of claim 1, the method further comprising the step of:
2 placing a third cable in one of the said plurality of ducts to provide another connection
3 between the first point and said offshore termination point;

4 receiving at said termination point, a fourth cable extending from a third point; and
5 connecting said third cable and said fourth cable at said offshore termination point, wherein a
6 point-to-point cable connection is made from the first point to the third point.

1 23. The method of claim 1, wherein the second communication cable is received at
2 the offshore termination point as a single point-to-point cable unassociated with a plurality of
3 ducts.

1 24. The method of claim 1, wherein the plurality of ducts includes an outer duct
2 having a plurality of sub-ducts defined therein.

1 25. . A multi-point cable connection system, the system comprising:
2 a termination point located at a first location, wherein the termination point includes a
3 first cable end associated with a first communication cable that extends from the termination
4 point to a second location, and a second cable end associated with a second cable that extends
5 from the termination point to a third location;
6 a plurality of ducts extending from a fourth location to the termination point, wherein a
7 third cable end associated with a third communication cable emerges from one of the plurality of
8 cable ducts, and wherein a fourth cable end emerges from another of the plurality of cable ducts;
9 and

10 wherein the third cable end is connected to the first cable end at the termination point,
11 and wherein the fourth cable end is connected to the second cable end at the termination point.

1 26. The system of claim 25, wherein the first cable end and the second cable end are
2 associated with single point-to-point cables each unassociated with a plurality of ducts.

1 27. The method of claim 24, wherein the plurality of ducts comprises at least two
2 separate and distinct conduits.

1 28. The method of claim 27, wherein the two separate and distinct conduits are
2 housed by a multi-bore connection plate located at an end of a length of the outer duct.

1 29. The method of claim 24, wherein the outer duct is fabricated onshore.

1 30. The method of claim 1, wherein the termination point is installed at a first depth
2 underwater, wherein the termination point is recoverable to a second depth, and wherein the
3 second depth is a serviceable depth.

1 31. The system of claim 16, wherein the termination point includes multiple cable
2 exits over an extended region, whereby cables can exit ones of the plurality of ducts at spaced
3 apart locations.

1 32. The system of claim 16, wherein the outer duct is not integrally attached to the
2 plurality of ducts.

33. A method of providing communication between first and second points separated by an extended span of water including a first region of shallow water and a second region of relatively deep water, the method comprising:

providing a plurality of ducts from the first point through the first region of the extended span to an offshore termination point between the first and second point, wherein the offshore termination point is an offshore platform;

placing a first cable in one of said plurality of ducts to provide a connection between the first point and said offshore termination point;

receiving at said offshore termination point, a second cable from the second point; and

providing communication equipment on said offshore platform to receive and transmit signals via the first and second cables.

34. The method of claim 1, wherein one of the plurality of ducts is an outer duct that encompasses at least two others of the plurality of ducts, wherein the outer duct includes a water tight seal, wherein a region of trapped air is disposed between the outer duct and the at least two others of the plurality of ducts, and wherein the method further comprises:

installing the plurality of ducts, wherein installing the plurality of ducts includes eliminating the trapped air such that the plurality of ducts sinks in water.